IN THE SPECIFICATION:

Amend the Description of the Preferred Embodiment starting on Page 4, line 24 as follows:

Referring to the drawings Figures 1-4, an acceleration measuring apparatus 10 has an engine 11 mounted thereto in Figure 1. The engine is mounted to an engine cart 12 which has wheels 13 to roll the cart 12 and the engine 11 into position for attaching the engine to the acceleration measuring apparatus 10. The cart 12 has an aligning cone 14 shown in Figure 3 which is pushed into an opening in the supporting base frame 15 for aligning the cart in a proper position for attaching the crank shaft of the engine 11 to the drive shaft of the acceleration measuring apparatus 10. The acceleration measuring apparats 10 base 15 has general support frame members 16 supporting a plurality of journals 17 which in turn supports an inertia wheel supporting shaft 18. The inertia supporting shaft 18 holds a plurality of inertia wheels 20 aligned in two banks, as seen in Figure 2. The inertia supporting shaft 18 is in turn connected to a gear box 21 which is connected to the shaft coupling 22 which in turn allows a connection to the engine 11 crank shaft. An exhaust pipe 23 has been connected to the engine header ~~24~~ so as to feed the exhaust gases from the room in which the engine is being tested. The inertia wheel housing 24 has

an inertia wheel cover 25 which is shown in Figure 1 and in an open position in Figure 2 exposing the inertia wheels 20. The number of inertia wheels 20, as seen in Figure 4, can include a plurality of main wheels 26, which are always fully engaged to the shaft, and a plurality of floating inertia wheels 27, all mounted to the inertia wheel shaft 18 and selectively engageable thereto and having a plurality of elongated bolts 28 extending through the floating inertia wheels 27 and the main inertia wheels 26. The floating inertia wheels are readily engaged or disengaged to the other wheels in order to adjust the inertia placed on the shaft 18. The shaft 18 is connected through the gear box 21 and couplings to the engine 11 so that the engine 11, when running, produces a rotation of the crank shaft which rotates the inertia wheels 20 which simulate a load through a chosen RPM range for recording the elapsed times at various RPM points. The inertia wheels are engaged or disengaged from the shaft 18 to simulate different race tracks lengths so that the engine can be matched to a race car for different race tracks. An air gap 30 is positioned between the floating inertia wheels 27 and the main inertia wheels 26 to allow the floating or slipping of the floating wheels on the shaft 18. A plurality of sensors 31 are connected to the output of the crank shaft of the engine 11 and can be connected to the engine as

desired for measuring velocity acceleration specifically for recording elapsed times and various RPM points. The inertia wheels can then selectively engaged or disengaged to simulate a specific race track length for race tracks so that the engine can be easily tested prior to mounting in a vehicle to simulate the combination of an engine with a particular racing vehicle and race track.

In operation, the engine 11 is mounted to an engine cart 12 and is then aligned and connected to the acceleration testing apparatus 10 with the exhaust pipe 23 connected to the headers ~~24~~ of the engine 11. The inertia wheels 20 are then selectively engaged or disengaged to adjust the inertia for a particular vehicle that the engine is to be placed in. The engine is then started and accelerated through a predetermined RPM range simulating a particular race track and measuring the elapsed times and preselected RPMs so that the acceleration of the engine can be recorded under selected loads to simulate race track lengths.